

LISTING OF THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-6. (Canceled)

7. (Previously Presented) A method of manufacturing a semiconductor device comprising:

providing an amorphous semiconductor film with a metal element for promoting crystallization of said semiconductor film;

heating said amorphous semiconductor film to crystallize said amorphous semiconductor film;

forming a metal element diffusion film comprising a semiconductor over the crystallized semiconductor film, said forming of the metal element diffusion film including the step of artificially increasing a defect density of the metal element diffusion film;

diffusing the metal element from the crystallized semiconductor film into the metal element diffusion film; and

removing the metal element diffusion film after the step of diffusing the metal element.

8. (Previously Presented) The method of claim 7 wherein said metal element diffusion film is an amorphous silicon film.

9. (Previously Presented) The method of claim 7 wherein said metal element diffusion film is a polycrystalline silicon film.

10. (Previously Presented) The method of claim 7 wherein said metal element diffusion film is an amorphous Si_xGe_{1-x} film where 0<x<1.

11. (Previously Presented) The method of claim 7 wherein said metal element is at least one of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.

12. (Previously Presented) A method of manufacturing a semiconductor device comprising:

providing a selected portion of an amorphous semiconductor film with a metal element for promoting crystallization of said semiconductor film;

heating said amorphous semiconductor film to crystallize said amorphous semiconductor film wherein the crystallization proceeds from said selected portion laterally;

forming a metal element diffusion film comprising a semiconductor over the crystallized semiconductor film, said forming of the metal element diffusion film including the step of artificially increasing a defect density of the metal element diffusion film;

diffusing the metal element from the crystallized semiconductor film into the metal element diffusion film; and

removing the metal element diffusion film after the step of diffusing the metal element.

13. (Previously Presented) The method of claim 12 wherein said metal element diffusion film is an amorphous silicon film.

14. (Previously Presented) The method of claim 13 wherein said metal element diffusion film is a polycrystalline silicon film.

15. (Previously Presented) The method of claim 13 wherein said metal element diffusion film is an amorphous $\text{Si}_x\text{Ge}_{1-x}$ film where $0 < x < 1$.

16. (Previously Presented) The method of claim 15 wherein said metal element is at least one of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.

17. (Previously Presented) A method of manufacturing a semiconductor device comprising:

providing an amorphous semiconductor film with a metal element for promoting crystallization of said semiconductor film;

heating said amorphous semiconductor film to crystallize said amorphous semiconductor film;

forming a metal element diffusion film comprising a semiconductor over the crystallized semiconductor film, said forming of the metal element diffusion film including the step of artificially increasing a defect density of the metal element diffusion film;

diffusing the metal element from the crystallized semiconductor film into the metal element diffusion film by irradiating the crystallized semiconductor film with laser; and

removing the metal element diffusion film after the step of diffusing the metal element.

18. (Previously Presented) The method of claim 17 wherein said metal element diffusion film is an amorphous silicon film.

19. (Previously Presented) The method of claim 17 wherein said metal element diffusion film is a polycrystalline silicon film.

20. (Previously Presented) The method of claim 17 wherein said metal element diffusion film is an amorphous Si_xGe_{1-x} film where $0 < x < 1$.

21. (Previously Presented) The method of claim 17 wherein said metal element is at least one of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.

22. (Previously Presented) A method of manufacturing a semiconductor device comprising:

providing an amorphous semiconductor film with a metal element for promoting crystallization of said semiconductor film;

heating said amorphous semiconductor film to crystallize said amorphous semiconductor film;

forming an etching stopper film on the crystallized semiconductor film;

forming a metal element diffusion film comprising a semiconductor over the crystallized semiconductor film with the etching stopper film interposed there between, said forming of the metal element diffusion film including the step of artificially increasing a defect density of the metal element diffusion film;

diffusing the metal element from the crystallized semiconductor film into the metal element diffusion film by irradiating the crystallized semiconductor film with laser; and removing the metal element diffusion film after the step of diffusing the metal element.

23. (Previously Presented) The method of claim 22 wherein said metal element diffusion film is an amorphous silicon film.

24. (Previously Presented) The method of claim 22 wherein said metal element diffusion film is a polycrystalline silicon film.

25. (Previously Presented) The method of claim 22 wherein said metal element diffusion film is an amorphous $\text{Si}_x\text{Ge}_{1-x}$ film where $0 < x < 1$.

26. (Previously Presented) The method of claim 22 wherein said metal element is at least one of Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt, Cu and Au.

27. (Previously Presented) The method of claim 22 wherein said etching stopper film comprises silicon nitride.

28. (Previously Presented) The method of claim 22 wherein said etching stopper film comprises silicon oxide.

29. (Previously Presented) The method according to claim 7 wherein said metal diffusion film is directly formed on said crystallized semiconductor film.

30. (Previously Presented) The method according to claim 12 wherein said metal diffusion film is directly formed on said crystallized semiconductor film.

31. (Previously Presented) The method according to claim 17 wherein said metal diffusion film is directly formed on said crystallized semiconductor film.

32. (Previously Presented) The method of claim 7 further comprising the step of forming an etching stopper film which is interposed between said metal element diffusion film and said crystallized semiconductor film.

33. (Previously Presented) The method of claim 12 further comprising the step of forming an etching stopper film which is interposed between said metal element diffusion film and said crystallized semiconductor film.

34. (Previously Presented) The method of claim 32 wherein said etching stopper film comprises silicon nitride.

35. (Previously Presented) The method of claim 32 wherein said etching stopper film comprises silicon oxide.

36. (Previously Presented) The method of claim 33 wherein said etching stopper film comprises silicon nitride.

37. (Previously Presented) The method of claim 33 wherein said etching stopper film comprises silicon oxide.